

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Francis W. Daly, JR.

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Examiner: Gutierrez, Anthony

Title: WEATHER INCIDENT PREDICTION

**REPLY BRIEF**

April 26, 2007

## **REPLY**

The Examiner's Answer to the Applicant's Amended Appeal Brief offers little in the way of justification for the claim rejections beyond that set forth during the underlying prosecution, and fails to offer more than conclusory statements in response to the Applicant's specific and detailed arguments demonstrating that the claims are entitled to allowance.

### **Response to Argument**

In the Examiner's Answer mailed February 26, 2007, the Examiner states "The Examiner relies on Kuntman to teach what he maintains in and of itself would have been known to one of ordinary skill in the art at the time of invention, namely that wind shear is path dependent and that wind shear has a different level of significance depending on the phase of flight of the aircraft" (Examiner's Answer, p. 8). The Examiner also states "...the Examiner relies on Kuntman to teach what was known to one of ordinary skill in the art regarding wind shear paths and phase of flight" (Examiner's Answer, p. 8). The Examiner further states "Kuntman discloses that wind shear when detected leads to an alert provided by the detection device. Kuntman also discloses that this is important for critical phases of flight, yet not important enough for non-critical phases of flight that the wind shear detection mode is not even activated. The Examiner therefore believes that since an alert is generated only when wind shear is detected and only when the device is in wind shear detection mode, and since the device is only in detection mode during critical phases of flight, the Examiner believes that "generating a warning as a function of the phase of flight" is disclosed in the Kuntman reference" (Examiner's Answer p. 9).

Applicant believes that even if Kuntman teaches all that the Examiner asserts, Kuntman's teachings still do not supply the missing limitations of Otsuka and Frank (Applicant additionally points out that "generating a warning as a function of the phase of flight" is not a limitation contained in the claims). In fact, according to the Examiner and Kuntman, Kuntman teaches away from the present invention in a different way than previously pointed out by the Applicant.

As the Examiner notes and Kuntman states, “Kuntman discloses that wind shear when detected leads to an alert provided by the detection device. Kuntman also discloses that this is important for critical phases of flight, yet not important enough for non-critical phases of flight that the wind shear detection mode is not even activated” (Examiner’s Answer, p. 9). Thus, Kuntman teaches away from wind shear detection during non-critical phases of flight. In contrast, Applicant teaches wind shear detection during non-critical phases of flight also: “According to another aspect of the invention, the weather incident prediction function of the invention communicates with the on-board flight management system to access the aircraft’s intended flight path stored therein and compare it to predicted future position of the storm cell. If the predicted storm cell path and the aircraft’s intended flight path coincide, and if conditions, such as phase of flight and storm cell intensity, could threaten the safety of flight, an appropriate warning is issued” (Summary of the Invention, paragraph 45).

Knowledge of critical and non-critical phases of flight combined with knowledge that wind shear is path dependent and that wind shear has a different level of significance depending on the phase of flight of the aircraft does not render obvious “retrieving a phase of flight of the aircraft; and generating a warning as a function of comparing said forecast information describing a weather condition and said phase of flight” (from Applicant’s Claim 1). There is no teaching, suggestion, or motivation in Kuntman (or Otsuka or Frank) to retrieve a phase of flight. The fact that Kuntman’s device is turned on only during critical phases of flight does not render obvious “retrieving a phase of flight.” Two possible scenarios for an aircraft illustrate the point. First, an aircraft in a non-critical phase of flight that detects a wind shear condition that the craft will coincide with during a non-critical phase of flight. Applicant’s invention would detect the wind shear condition and compare it to a phase of flight in which the craft is projected to be when the craft coincides with the condition, and generate a warning based on the comparison. Kuntman’s invention would be off, and thus would not function. If Kuntman’s invention were on, there would be no retrieval of flight phase, and Kuntman’s invention would generate a

warning regardless of the phase of flight the aircraft would be in when the craft coincided with the condition. Second, an aircraft in a non-critical phase of flight that detects a wind shear condition the plane will coincide with during a critical phase of flight. Applicant's invention would detect the condition and issue a warning. Kuntman's invention would not be on, and so would not function to generate a warning. Kuntman's invention would be turned on at the start of a critical phase of flight, and thus would generate a warning, but at a much later time than Applicant's invention. If Kuntman's invention was turned on, Kuntman would generate a warning, not because Kuntman retrieved a phase of flight, but because Kuntman assumes that all phases are critical if Kuntman's device is on. At best, the combination of Otsuka and Frank with Kuntman would operate to generate inappropriate warnings, since any time a wind shear condition was detected, a warning would be issued, because Kuntman assumes that it is in a critical phase of flight. Kuntman obviously cannot contain a teaching, suggestion, or motivation to retrieve a phase of flight, because Kuntman's device is only turned on during critical phases of flight, and thus Kuntman's decision to issue a warning is based on the assumption that the phase of flight is critical.

For the foregoing reasons, the Examiner's final rejections should be reversed and the pending claims should be allowed.

RESPECTFULLY SUBMITTED this 26<sup>th</sup> day of April, 2007.

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